

PATENT APPLICATION

for:

"Laser cutting method and apparatus with a
bifocal optical means and a hydrogen-based
assist gas"

in the name of:

L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET
L'EXPLOITATION DES PROCEDES GEORGES CLAUDE

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ABSTRACT

Apparatus and method for cutting a workpiece by the use
of a laser beam and an assist gas, in which at least
one optical means is used to focus the laser beam at
several focal points separate from one another, and in
which, as assist gas for the said laser beam, a gas
mixture containing hydrogen and at least one inert gas
is used. The optical means is transparent or reflecting
and is chosen from lenses, mirrors and combinations
thereof, preferably a bifocal lens. The workpiece to be
cut is made of stainless steel, coated steel, aluminium
or an aluminium alloy, non-alloy steel or alloy steel.
The inert gas is chosen from nitrogen, argon, helium
and mixtures thereof.

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